

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Electrical and Electronics Engineering

Lesson plan of faculty member for the academic year 2017–18

Class: III B Tech

Branch-Section: EEE

Semester: I

Subject: POWER SYSTEM – II

Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Transmission Line Parameters		
1	Introduction	12 July 2017
2	Introduction	14 July 2017
3	Types of conductors – Calculation of resistance for solid conductors	15 July 2017
4	Calculation of inductance for single phase & three phase calculation	18 July 2017
5	Single and double circuit lines , concept of GMR & GMD	21 July 2017
6	Symmetrical & asymmetrical conductor configuration with and without transposition	22 July 2017
7	Tutorial : Numerical problems	18,19 July 2017
8	Calculation of capacitance for 2 wire and 3 wire system	24 July 2017
9	Effect of ground on capacitance	25 July 2017
10	Capacitance calculation for symmetrical & asymmetrical single and three phase	28 July 2017
11	Single and double circuit lines	29 July 2017
12	Tutorial : Numerical problems	24,25,26 July 2017
13	Numerical problems	31 July 2017
14	Numerical problems	31 July 2017
UNIT-II: Performance of short , medium and long length transmission lines		
15	Classification of transmission lines & their model representation	1 August 2017
16	Nominal -T & Nominal -pie and A,B,C,D constants for symmetrical network	4 August 2017
17	Nominal -T & Nominal -pie and A,B,C,D constants for asymmetrical network	5 August 2017
18	Tutorial : Numerical problems	1,2 August 2017
19	Mathematical solutions for to estimate regulation and efficiency	7 August 2017
20	Long transmission line – rigorous solution ,	8 August 2017
21	Evaluation of A,B,C,D constants	11 August 2017
22	Interpretation of the long line equations incident , refilected & refracted waves	12 August 2017
23	Tutorial : Numerical problems	7,8,9 August 2017
24	Wave length and velocity of propagation of wave	18 August 2017
25	Surge impedance and SIL of long lines	19 August 2017
26	Tutorial : Numerical problems	16 August 2017
27	Representation of long lines Equivalent -T & Pie network models	21 August 2017
28	Numerical problems	22 August 2017
29	Class test	26 August 2017
30	Tutorial : Numerical problems	21,22,23 August 2017
UNIT-III: Power system Transients & factors governing the performance of Transmission lines		
31	Types of system transients – Travelling or propagation of surges	28 August 2017
32	Attenuation , distortion , reflection and refraction coefficients	29 August 2017
33	Tutorial : Numerical problems	28,29,30 August 2017
34	Terminations of lines with different types of condition open circuited line and shorted circuited line	1 September 2017
35	T-junction , lumped reactive junction	4 September 2017
36	Bewley's lattice diagrams	5 September 2017

37	Tutorial : Numerical problems	4,5 September2017
38	Skin & proximity effects – description and effect on resistance of solid conductors	9 September2017
39	Tutorial : Numerical problems	4,5 September2017
40	Ferrantic effect – charging current-Effect on regulation of the transmission line	11 September2017
41	Corona -Description of the phenomenon	12 September2017
42	Critical voltages and power loss	15 September2017
43	Factors affecting the corona	16 September2017
44	Tutorial : Numerical problems	11,12,13 September2017
45	Radio interference	18 September2017
46	Advantages and disadvantages of corona	19 September2017
UNIT-IV:Overhead line insulators & sag , tension calculations		
47	Types of insulators	22 September2017
48	String efficiency and voltage distribution	23 September2017
49	Tutorial : Numerical problems	18,19 September2017
50	Methods for improvement of string efficiency	3October2017
51	Calculation of string efficiency	6 October2017
52	Capacitance grading and static shielding	7 October2017
53	Tutorial : Numerical problems	3,4
54	Sag and tension calculations for equal and unequal heights of towers	9 October2017
55	Effect of wind and ice on weight of the conductor	10 October2017
56	Stringing chart sag templates and its applications	13 October2017
57	Tutorial : Numerical problems	9,10,11
58	Numerical problems	16 October2017
59	Class test	17 October2017
UNIT-V: Underground cables		
60	Types of cables	20 October2017
61	Construction of cable	21 October2017
62	Tutorial : Numerical problems	16,17October2017
63	Types of insulating materials	23 October2017
64	Calculation of insulation resistance and stress in insulation	24 October2017
65	Capacitance of single and 3 core belted cables	27 October2017
66	Grading of cables	28 October2017
67	Tutorial : Numerical problems	23,24,25
68	Capacitance and inter sheath grading	30 October2017
69	Hv cables	31 October2017
70	Numerical problems	3November2017
71	Tutorial : Numerical problems	30,31 October2017, 1 November2017
72	Numerical problems	6 November2017
73	Class test	7 November2017
74	Tutorial : Numerical problems	6,7 November2017

Text books:

1. Electrical power systems ,C.L.Wadhwa, New Age International (P)Limited.
2. Electrical power systemsPSR. Murthy , BS Publications.

Name and signature of the faculty: Ms Mayuri S -----

Name and signature of Head of the Department: Ms Deepthi S -----